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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/758,483

01/11/2001

Srinivas Bangalore

2000-0034

9337

7590

12/02/2004

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EXAMINER

VO, HUYEN X

ART UNIT

PAPER NUMBER

2655

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/758,483

Applicant(s)

BANGALORE ET AL.

Examiner

Huyen Vo

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-7 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Amendment*

1. The applicant has submitted an amendment, filed 9/15/2004, amending the base claim 1 include limitations regarding "*forming a derivation tree*" (see amended claim 1).

Applicant's arguments have been considered but are moot in view of the new grounds of rejection, necessitated by the amended claims.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless – (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Reynar et al. (US Patent No. 6789231).

4. Regarding claim 1, Reynar et al. disclose a method of performing natural language generation, the method comprising the steps of:

selecting a reference grammar (col. 12, ln. 14-20);

applying an input dependency tree to a tree-choosing module, the tree choosing module using a stochastic tree model to select syntactic realizations for each node and forming a derivation tree (*the operation of figure 8 or col. 17, ln. 14 to col. 18, ln. 40*);

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producing a word lattice for the selected syntactic realization in the derivation tree, the word lattice comprising all possible word sequences permitted by the input dependency tree structure, the chosen stochastically selected syntactic realizations, and the reference grammar (*the operation of figure 9 or col. 18, ln. 41 to col. 19, ln. 47*); and choosing a linear precedence output string of least cost from the produced word lattice (*col. 19, ln. 4-47, by ranking candidate list*).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reynar et al. (US Patent No. 6789231) in view of applicant admitted prior art.

7. Regarding claim 2, Reynar et al. disclose the use of grammar to analyze word candidates (*col. 12, ln. 14-20*), but fail to specifically disclose the grammar is an extended tree-adjoining grammar (XTAG). However, applicant admitted prior art teaches an extended tree-adjoining grammar (XTAG) (*section [0014] on page 1*).

Since Reynar et al. and applicant admitted prior art are analogous art because they are from the same field of endeavors, it would have been obvious to one of

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ordinary skill in the art at the time of invention to modify Reynar et al. by incorporating the teaching of applicant admitted prior art in order to enhance analysis accuracy of word candidate while reduce processing time.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reynar et al. (US Patent No. 6789231) in view of Ting (US Patent No. 5930746).

9. Regarding claim 3, Reynar et al. disclose a method as defined in claim 1 wherein the Viterbi algorithm is used to choose the output string from the word lattice. However, Ting teaches that the Viterbi algorithm is used to choose the output string from the word lattice (*col. 18, ln. 18-67*).

Since Reynar et al. and Ting are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Reynar et al. by incorporating the teaching of Ting in order to speed up the analysis process.

***Allowable Subject Matter***

10. Claims 4-7 are allowed over prior art of record.

The following is an examiner's statement of reasons for allowance: Reynar et al. (US Patent No. 6789231) disclose a method for providing alternatives for text derived from stochastic input sources. In order to determine alternatives for the text selection, a stochastic input combiner parses the text selection into text component from different

input sources. The combiner then retrieves a stochastic model containing alternatives for the text component. If the stochastic text component is the result of a series of stochastic input sources, the combiner derives a stochastic model that accurately reflects the probabilities of the results of the entire series. The combiner creates a list of alternatives for the text selection by combining the stochastic models retrieved (*the operation of figures 7-9 or referring to col. 15, ln. 49 to col. 19, ln. 47*). Reynar et al. fail to specifically disclose the step of stochastically selecting tree-adjoining grammar trees for each node in the input dependency tree to create a semi-specified derivation tree. Furthermore, it would have not been obvious to one of ordinary skill in the art at the time of invention to incorporate step of stochastically selecting tree-adjoining grammar trees for each node in the input dependency tree to create a semi-specified derivation tree in the teaching of Reynar et al. Therefore, claims 4-7 are allowed over prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo

November 2, 2004

  
DAVID OMETZ  
PRIMARY EXAMINER  
ART UNIT 2653